

## ENCLOSURE 1

### SPOKANE TRIBE OF INDIANS

#### SURFACE WATER QUALITY STANDARDS RESOLUTION 2001-144

#### BASIS FOR EPA'S ACTION

This enclosure provides EPA's basis for today's action. EPA is approving all of the Spokane Tribe of Indians Surface Water Quality Standards except for certain provisions that are outside the scope of Section 303(c) of the Clean Water Act. EPA is not taking action on the provisions outside the scope of Section 303(c). The following provisions are approved:

1. *Section 2, Definitions\**
2. *Section 3, General Conditions\**
3. *Section 4, Antidegradation Policy\**
4. *Section 5, Narrative Criteria, except for #7\**
5. *Section 6, Toxic Pollutants, (1) - (3), (6), (7), and Table 1 acute and chronic aquatic life criteria\**
6. *Section 6, Toxic Pollutants, (4), (5), and the last two columns of Table 1, including relevant footnotes.* Provisions including the basis for the risk level and fish consumption rates used in calculation of the human health criteria, and all numeric water quality criteria for protecting human health for water and fish consumption uses, and fish consumption only uses.
7. *Section 6, Toxic Pollutants, Table 2.* Table containing numeric criteria for primary contact ceremonial and spiritual uses. Radioactive material criteria in Table 2 are approved, **insofar as those criteria address radioactive materials that are pollutants under the CWA.** EPA's regulations define "pollutant" to include radioactive materials except those regulated under the Atomic Energy Act of 1954, as amended.
8. *Section 7, Radioactive Materials, narrative and numeric criteria, including Table 3.* Criteria for radioactive materials to protect human health are approved, **insofar as those criteria address radioactive materials that are "pollutants" under the CWA.**
9. *Section 8, Biological Criteria\**
10. *Section 9, Water Use and Criteria Classes, (1)(b)(ii) and (v), (1)(c)(ii) - (v); (2)(b)(ii) and (v), (2)(c)(ii) - (v), and (4)(b)(ii) and (v), (4)(c)(ii) - (v), (vi).* Provisions in Class AA, Class A, and Lake Class, including the designated uses for cultural use, fish and shellfish, and criteria for pH, Dissolved Oxygen, Temperature, Nutrients (Table 4), and Total Dissolved Gas \*
11. *Section 9, Water Use and Criteria Classes, (1)(a) and (1)(b)(i),(iii), (iv), (vi), (vii); (2)(a) and (2)(b)(i), (iii), (iv), (vi), (vii); and (4)(a) and (4)(b)(i), (iii), (iv), (vi), (vii).* Provisions in Class AA, A, and Lake Class waters including primary contact ceremonial and

spiritual, water supply (domestic, industrial, agricultural), stock watering, primary contact recreation, commerce and navigation uses.

12. ***Section 9, Water Use and Criteria Classes, (1)(c)(i) and (1)(c)(vi); (2)(c)(i) and (2)(c)(vi); and (4)(c)(i) and (4)(c)(vi).*** Provisions including bacterial criteria for the protection of recreation uses, and an aesthetic narrative criterion.
13. ***Section 10, General Classifications\****
14. ***Section 11, Specific Classifications\****
15. ***Section 12, Wetlands\****

Those provisions above marked with an asterisk (\*) are approved for purposes of CWA Section 303(c), subject to completion of consultation under Section 7(a)(2) of the ESA.

EPA is not taking action on the following provisions which are outside the scope of Section 303(c) of the CWA:

1. ***Section 1, Introduction***
2. ***Section 5, (7 )***. Guidance to permit writers.
3. ***Section 13, Implementation***
4. ***Section 14, Enforcement***

## **I. PROVISIONS APPROVED, NOT SUBJECT TO ESA CONSULTATION**

### **A. Designated Uses to be Protected in Class AA (Extraordinary), Class A (Excellent), and Lake Class Waters as well as any Unclassified Surface Waters on the Spokane Reservation**

#### **1) Water Supply (domestic, industrial, and agricultural) and stock watering**

***Section 9, Water Use and Criteria Classes, (1)(b)(iii) and (iv), (2)(b)(iii) and (iv), and (4)(b)(iii) and (iv)*** – four water supply designated beneficial uses are identified for surface waters within the Reservation. The water supply uses are: domestic, industrial, and agricultural and stock watering. These uses apply to all classes of water (and therefore all waters) on the Reservation. These designated beneficial water supply uses are consistent with federal requirements at 40 CFR 131.10, therefore EPA approves these water supply uses.

#### **2) Primary Contact Designated Beneficial Uses**

***Section 9, Water Use and Criteria Classes, (1)(b)(i) and (1)(b)(vi), (2)(b)(i) and (2)(b)(vi), (4)(b)(i) and (4)(b)(vi)*** – all waters in all classes are protected for primary contact ceremonial and spiritual uses and primary contact recreation. In Section 2, Definitions, primary contact recreation means “activities in which a person would have direct contact with water to the point of complete submergence, including but not limited to ceremonial, spiritual and cultural

uses, and skin diving, swimming, and water skiing.”

Primary contact ceremonial and spiritual water use means “activities involving Native American religious, spiritual and cultural practices which may involve primary and secondary contact with water, and immersion and intentional or incidental ingestion of water or steam. Such use also requires protection of sensitive and valuable aquatic life and riparian habitat.”

Water quality standards are to protect public health and welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act (40 CFR 131.2). The Tribe’s uses described above address these objectives for protection of public health and welfare and provide a “swimmable” level of protection consistent with the Section 101(a)(2) goal of the Act.

EPA believes that these primary contact and ceremonial and spiritual uses appropriately reflect the existing and potential uses and are consistent with federal requirements at 40 CFR 131.10. While states have not generally assigned a ceremonial use, this use protects the Tribe’s health and welfare and represents the Tribe’s current and desired use of the water. Therefore EPA approves the primary contact recreation and the primary contact ceremonial and spiritual uses.

### **3) Other Uses**

*Section 9, Water Use and Criteria Classes, (1)(b)(vii), (2)(b)(vii) and (4)(b)(vii)* – all waters in all classes are protected for commerce and navigation. This use is consistent with federal requirements at 40 CFR 131.10, therefore EPA approves this use.

## **B. Water Quality Criteria for the Protection of Designated Uses on the Spokane Reservation**

### **1) Bacteria Criteria**

*Section 9, Water Use and Criteria Classes, (1)(c)(i), (2)(c)(i), and (4)(c)(i)* – under each waterbody class there are numeric bacteria criteria for the protection of primary contact uses involving immersion in water and consumption of incidental amounts of water. The Tribe has adopted numeric *Escherichia coli* (*E. coli*) criteria which are consistent with EPA’s latest recommended criteria for the protection of primary contact recreation uses (EPA Quality Criteria for Water, 1986), therefore these criteria meet the requirements of 40 CFR 131.11(b)(1)(i) and are approved.

### **2) Criteria for Toxic and Aesthetic Pollutants Affecting Human Health**

a) *Section 6, Toxic Pollutants, (4) - (5)* – these provisions include discussion of the risk level (one in one million) and fish consumption rate used in calculating the Tribe’s human health criteria for toxic pollutants. The Tribe’s adopted risk level for excess cancer risks due to

exposure to a toxic pollutant is consistent with EPA guidance in the EPA Water Quality Standards Handbook (1994). The Tribe's criteria for protection from exposure from consuming organisms use an assumed fish consumption rate of 86.3 grams per day, which is the default value for protection of subsistence fishers contained in EPA's draft revisions to its Human Health Criteria Methodology, found at 63 FR 43762. That value represents the best information available from EPA when the Tribe developed its toxic criteria table. The Tribe indicates in its WQS that the rate may be modified to reflect consumption rate analysis specific to the Spokane Tribe. Such an adjustment would be considered a change to the water quality standards requiring public input and submittal to EPA for review and approval. EPA approves provisions #4 and #5 as consistent with 40 CFR 131.11.

b) *Section 6. Toxic Pollutants, Table 1, human health criteria* -- the two columns on the far right side of Table 1 contain numeric water quality criteria for the protection of human health from: a) ingesting organisms caught in Reservation waters and drinking Reservation surface water, or b) simply from ingesting the organisms. The adopted numeric human health criteria are based on criteria recommendations published by EPA in either 57 FR 60848 (the "National Toxics Rule") or 64 FR 68354 (*National Recommended Water Quality Criteria - Correction*, April, 1999), EPA's update of its national criteria recommendations under Section 304(a) of the Clean Water Act that was available when the Tribe public noticed its draft standards. The Tribe used the more stringent of the numbers when comparing these two references. EPA considers the numbers in both of these references to be approvable, although the later reference contains more recent science. EPA's concern is that states or tribes not adopt numbers *less stringent* than the EPA criteria recommendations without adequate technical justification. The Tribe has adopted a risk value of  $10^{-6}$  for carcinogens. The Tribe's criteria are based on EPA's 304(a) criteria recommendations, adjusted to account for tribal fish consumption. Therefore the Tribe's criteria are consistent with 40 CFR 131.11(b)(1)(ii) and are approved.

c) *Section 6, Toxic Pollutants, Table 2, Water Quality Criteria for Primary Contact Ceremonial and Spiritual Uses* -- Table 2 contains numeric criteria based on MCLs (maximum contaminant levels) in EPA's Drinking Water Standards and Health Advisories (EPA 822-B-00-001, Summer 2000), except for the arsenic and bromoform criteria, which are consistent with the EPA advisories from 1996. Since the Tribe's adoption of standards EPA has published a new arsenic drinking water MCL of 10 ug/l, which became effective on January 22, 2002. There is overlap in some of the pollutants that are listed in Table 1 and Table 2. The criteria in Table 2 were developed to address only drinking water, as compared with the Table 1 criteria which address consumption of organisms and water, or consumption of organisms only. Where there is overlap between the two tables, the Table 1 human health criteria are generally more stringent and therefore will be the operative criteria in those cases for regulatory purposes. The Table 2 criteria are based on EPA's Drinking Water Standards and Health Advisories and therefore are consistent with 40 CFR 131.11 and are approved with the following caveat: tritium and strontium 90 criteria in Table 2 are approved only insofar as those criteria address radioactive materials that are pollutants under the CWA. EPA's regulations define "pollutant" to include radioactive

materials except those regulated under the Atomic Energy Act of 1954, as amended. (See below.)

d) **Section 7, Radioactive Materials** – this section contains criteria for protection of human health from radioactive materials. The section contains limits on gross alpha particle activity, Ra<sup>226</sup>, Ra<sup>228</sup>, Sr<sup>90</sup>, tritium, and gross beta radiation based on numeric criteria in EPA's National Primary Drinking Water Regulations (40 CFR 141) as well as **Table 3** which lists numeric criteria for radionuclides based on the Nuclear Regulatory Commission's Standards of Protection Against Radiation, 56 FR 23360. The Table 3 criteria are to be applied as "not to exceed" values when concentrations are in excess of natural conditions for analytes of the uranium and thorium decay chains. The criteria were calculated by taking the recommended effluent concentrations for water in Table 2, column 2 of the Nuclear Regulatory Commission's standards (56 FR 23360) and dividing this number by 1000 to provide protection at approximately the 10<sup>-6</sup> risk level for lifetime tribal exposure from drinking the water, consuming aquatic organisms, and inhalation of water vapor in sweat lodges. The Tribe also included Pb<sup>206</sup>, Pb<sup>207</sup>, and Pb<sup>208</sup>, stable end members of the uranium and thorium decay chains, in Table 3 to assist in fingerprinting sources of the radioactive members. The criteria for lead are expressed as ug/l and are based on the "Copper Lead Rule" in the Drinking Water regulations, 60 FR 16348, which states that lead in drinking water should not exceed 5 ug/l.

EPA approves the criteria for radioactive materials in Section 7 as consistent with Section 303(c) and 40 CFR 131.11, insofar as the standards address radioactive materials that are "pollutants" under the CWA. EPA's regulations define "pollutant" to include radioactive materials except those regulated under the Atomic Energy Act of 1954, as amended. (See 40 CFR Section 122.2) See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976). Therefore it will be necessary for the Tribe or EPA, where appropriate, to establish that a particular radioactive material is a "pollutant" before taking action under the CWA, such as establishing NPDES limitations consistent with these water quality standards or listing a waterbody or establishing or approving a total maximum daily load (TMDL) under Section 303(d) of the CWA for a waterbody that is not achieving these standards. A radioactive material may be a "pollutant" within the definition at 40 CFR 122.2 in some fact-specific contexts, while not being a "pollutant" within that definition in other fact-specific contexts.

e) **Section 9, Water Use and Criteria Classes, (1)(c)(vi), (2)(c)(vi), (4)(c)(vi)** – this section contains a narrative aesthetic criterion in each water class that states that aesthetic values shall not be impaired by the presence of materials or their effects which "offend the senses of sight, smell, touch, or taste." This provision is consistent with EPA's narrative "free from" provisions (EPA Water Quality Standards Handbook) and the requirement under 40 CFR 131.11(b)(2) to establish narrative criteria where numerical criteria cannot be established or to supplement numerical criteria. This narrative criterion is therefore approved.

## **II. PROVISIONS APPROVED SUBJECT TO COMPLETION OF ESA CONSULTATION**

The following provisions included in the Spokane Water Quality Standards are approved for purposes of CWA Section 303(c), subject to completion of consultation under Section 7(a)(2) of the ESA. The provisions that EPA is approving in today's action, under this heading, include policies, procedures, goal statements (narrative criteria), designated uses pertaining to aquatic life and cultural uses, and numeric aquatic life criteria for conventional parameters and toxic pollutants which together establish the regulatory framework for water quality management for Reservation waters. It is possible that the outcome of ESA consultation may result in the Region's reassessment of its approval decision for the identified water quality standards.

## **A. Generally Applicable Provisions and Policies**

### **1) Definitions**

*Section 2, Definitions* – the definitions section provides the meaning of terms used in the Tribe's water quality standards or that are important in understanding the basis for the standards. The definitions are consistent with those promulgated by EPA at 40 CFR § 131.3 and those generally incorporated into EPA guidance documents and provide information needed for application and implementation of the water quality standards (40 CFR 131.6). EPA therefore approves the definitions in the Tribe's water quality standards.

### **2) General Conditions**

*Section 3, General Conditions* – this section of the Tribe's water quality standards regulations contains direction on how the standards are to be applied, including: protection of the most sensitive use of a water body; allowance for the natural condition to be determined as the criterion; the most stringent criterion applies at boundaries between two uses; allowance for development and adoption of site-specific criteria; and specification of analytical testing methods. The Tribe has indicated (12/26/00 letter from Rudy Peone) that any natural condition criterion will be developed as a site-specific criterion. The provisions in this section are consistent with EPA guidance and the requirements for adoption of criteria found in 40 CFR 131.11 and therefore the provisions under General Conditions are approved.

### **3) Antidegradation Policy**

*Section 4, Antidegradation Policy* – the Tribe's provisions for three tiers of antidegradation protection are almost identical to the language in the EPA regulations at 40 CFR 131.12. The Tribe adds to tier 2, waters exceeding (i.e. better than) necessary levels, applicability to total maximum daily loads (TMDLs). This means that a tier 2 analysis will also be done when degradation will occur to a waterbody, within the context of a "preventative" TMDL, i.e. one that has allocated a reserve capacity, but that capacity isn't used up yet. In discussing the process that will be followed in determining whether to allow degradation where water quality exceeds levels necessary to support CWA Section 101(a) goal uses, the Tribe's

policy requires “full satisfaction of the intergovernmental coordination and public participation required by law” and the federal policy references the need for “full satisfaction of the intergovernmental coordination and public participation provisions of the State’s continuing planning process.” Because “continuing planning process” refers to State areawide waste treatment management required by CWA Section 208, and is not relevant to the administration of water quality programs on an Indian reservation, the Region believes this difference is justified. It is otherwise consistent with the federal policy at 40 CFR 131.12 and therefore the antidegradation policy is approved.

## **B. Designated Water Uses to be Protected in Class AA, Class A, and Lake Class on the Spokane Reservation**

### **1) Cultural Water Use**

*Section 9, Water Use and Criteria Classes, (1)(b)(ii), (2)(b)(ii), and (4)(b)(ii)* - each water class is protected for cultural water use. According to the Definitions section, cultural water use means “the use of waters to support and maintain the way of life of the Spokane Tribal People, including, but not limited to: use for instream flow, habitat for fisheries and wildlife, and preservation of habitat for berries, roots, medicines and other vegetation significant to the values of the Spokane Tribal People.” This use describes the necessity to maintain the physical integrity of the aquatic habitat, which is consistent with the Section 101(a) goal of the Clean Water Act. Water quality standards are to “serve the purposes of the Act” (40 CFR 131.2). Therefore the cultural water use is approved.

### **2) Aquatic Life Uses**

*Section 9, Water Use and Criteria Classes, (1)(b)(v), (2)(b)(v), and (4)(b)(v)* – each water class in this section has an identified broad use category of “Fish and shellfish” for protection of various life stages of aquatic species. The uses under this heading, for protection of aquatic life, are:

- Salmonid migration, rearing, spawning, and harvesting.
- Other fish migration, rearing, spawning, and harvesting.
- Mollusks, crustaceans and other shellfish rearing, spawning, and harvesting.

These uses are consistent with the water quality standards regulation at 40 CFR § 131.10, which requires generally that designated uses take into consideration the use and value of water for “protection and propagation of fish, shellfish and wildlife.”

All surface water segments are assigned “fishable” aquatic life designated uses consistent with the Section 101(a)(2) goal of the Act. EPA believes that the aquatic life designated beneficial uses in Section 9, as assigned in Section 10 and 11, appropriately reflect existing and attainable uses, and are consistent with federal requirements of 131.10 and therefore are approved.

### **3) General and Specific Use Classifications**

a) *Section 10, General Classifications* – this section provides a mechanism for identifying an appropriate waterbody classification for those waters not specifically classified.

b) *Section 11, Specific Classifications* – this section provides specific classifications for named waterbodies on the Reservation. If a waterbody is not specifically classified, the default classification in Section 10 applies:

- (1) All lakes and their feeder streams are classified as Lake Class, except for feeder streams specifically classified otherwise.
- (2) All reservoirs with a mean detention time of greater than 15 days are classified Lake Class.
- (3) All reservoirs with a mean detention time of 15 days or less are classified the same as the river section in which they are located.
- (4) All unclassified surface waters that are tributaries to classified water shall assume the class of the receiving water.
- (5) All other unclassified surface waters are classified as A.

The General Classification provisions in Section 10 and the Specific Classifications in Section 11 are consistent with federal requirements at 40 CFR 131.10, including adoption of the uses specified in Section 101(a)(2) of the CWA for all surface waters on the Reservation. Therefore the general and specific classifications for waterbodies are approved.

## **C. Water Quality Criteria for the Protection of Designated Uses on the Spokane Reservation**

### **1) Narrative Criteria**

*Section 5, Narrative Criteria* – this section identifies narrative criteria, #'s 1 - 6, to protect surface waters for aesthetic purposes, fish and aquatic life protection, and other designated uses. Narrative criteria are statements that describe the desired water quality goal. Narrative criteria are included in WQS to supplement the numeric criteria. Narrative criteria apply to all designated uses, at all flows. The six narrative criteria address floating solids, oil and grease; color; odor and taste; nuisance conditions; turbidity, and bottom deposits. These narrative requirements contain those recommended by EPA in the Water Quality Standards Handbook (EPA, 1994) for the protection of aquatic life and in addition contain a turbidity criterion narrative. These criteria are consistent with 131.11(b)(2) which directs States (and tribes) to establish narrative criteria where numerical criteria cannot be established or to supplement the numeric criteria. Therefore, EPA approves narrative criteria 1 - 6.

### **2) Toxic Pollutants**



a) **Section 6, Toxic Pollutants** – The Tribe has adopted a combination of provisions for toxic pollutants including: (1) a narrative toxics criterion; (2) a provision that allows bio-assessment studies as well as chemical analyses as a means to determine compliance with the narrative toxics criterion; (3) a provision that allows the development of site-specific criteria; and (7) numeric aquatic life criteria that consist of EPA’s recommended criteria for priority pollutants and non priority pollutants, drawn from either 57 FR 60848 (the “National Toxics Rule”) or 64 FR 68354 (*National Recommended Water Quality Criteria - Correction*, April, 1999), EPA’s update of its national criteria recommendations under Section 304(a) of the Clean Water Act.

b) **Section 6(1)** – this sub-section contains a narrative criterion that “Toxic pollutants shall not be introduced into surface waters of the Reservation in concentrations which have the potential either singularly or cumulatively to adversely affect existing and designated uses...or adversely affect public health, as determined by the Department.” This provision allows regulatory action in permits to protect public health or aquatic life from pollutants that do not yet have a numeric criterion listed in the standards. This is consistent with one of EPA’s required narrative “free froms” (Water Quality Standards Handbook, 1994) that are to be included in all state and tribal water quality standards and meets the requirement under Section 131.11 in the EPA regulations that directs States (and authorized Tribes) to “establish narrative criteria....where numerical criteria cannot be established or to supplement numerical criteria. This Tribal narrative criterion for the protection of designated beneficial uses is sufficient to protect designated uses and is consistent with 40 CFR § 131.11(b)(2) and therefore is approved.

c) **Section 6(2)** – this sub-section specifies that the Department may employ or require acute and/or chronic toxicity testing and biological assessments to evaluate compliance with the narrative toxics criterion. Section 101(a) of the CWA establishes as the objective of the CWA the restoration and maintenance of the chemical, physical and biological integrity of the Nation’s waters. To meet this objective water quality criteria should address biological integrity. Section 303(c)(2)(B) of the CWA provides that when numeric criteria are not available, Tribes shall adopt criteria based on biological monitoring or assessment methods.

EPA believes this bioassessment provision is consistent with federal requirements at 40 CFR § 131.11(b)(2) and the CWA, and therefore is approved.

d) **Section 6(3)** – this sub-section provides that criteria may be determined for toxic criteria not listed in Table 1, considering EPA’s Gold Book (*Quality Criteria for Water, 1986*), as updated, and other relevant information. This provision is sufficient to protect designated beneficial uses and is consistent with federal guidance and federal requirements at 40 CFR 131.11(b), and therefore is approved.

e) **Section 6(7)** – this provision clarifies that the toxic pollutant criteria in Table 1 apply to all waters of the Tribe and that when applying the criteria the most sensitive use is to be protected. This provision is consistent with 40 CFR 131.11(a)(1) and therefore is approved.

f) *Section 6, Table 1* – this table contains numeric toxic criteria for aquatic life applicable to all waters of the Reservation. EPA’s Water Quality Standards regulations require states and authorized tribes to adopt water quality criteria that will protect the designated uses of a water body. These criteria must be based on sound scientific rationale and must contain parameters or constituents sufficient to protect the designated uses. Criteria must be based on the best available information. In addition, the 1987 Amendments to the Clean Water Act, at 303(c)(2)(B), require the adoption of numeric toxic criteria for Section 307(a)(1) “priority” toxic pollutants, where EPA has published numeric criteria recommendations in accordance with its responsibility under Section 304(a) of the CWA.

The Tribe has adopted numeric toxic criteria for all Section 307(a)(1) toxic pollutants for which EPA has published aquatic life criteria. The Tribe’s criteria are based on EPA’s CWA Section 304(a) criteria for the protection of aquatic life issued by EPA either in 57 FR 60848 (the “National Toxics Rule”) or 64 FR 68354 (*National Recommended Water Quality Criteria - Correction*, April, 1999), EPA’s most recent update of its national criteria recommendations under Section 304(a) of the Clean Water Act available at the time the Tribe adopted its criteria. The Tribe adopted the more stringent numbers when comparing the tables in the National Toxics Rule and the 1999 304(a) criteria chart. Because the State of Washington’s criteria are generally consistent with the National Toxics Rule, it is appropriate for the Tribe to adopt the National Toxics Rule criteria where they are more stringent than more recent EPA criteria recommendations, so that downstream state waters will be protected when waters flow off the Reservation. Where more recent EPA criteria guidance includes more stringent values, it is appropriate for the Tribe to use these updated, more protective numbers. Two numeric aquatic life criteria (the acute criterion for PCBs and the chronic criterion for aldrin/dieldrin) are based on an earlier EPA guidance document, *Quality Criteria for Water, 1986*, and fill what would otherwise be a gap, making the Tribe’s criteria consistent with the State of Washington’s criteria for these two parameters. EPA’s primary concern in reviewing state and tribal numeric criteria is that the state or tribal criteria not be *less stringent* than EPA criteria recommendations without adequate technical justification that they are protective of designated uses. In addition to the 307(a)(1) priority toxic pollutants, the Tribe adopted published EPA criteria recommendations from the April 1999 chart for some “non-priority” toxic pollutants.

EPA approves the aquatic life criteria on Table 1 as consistent with the federal requirement at 40 CFR 131.11(b)(1)(i).

Since the Tribe’s adoption of its water quality standards, EPA has published revisions to its national aquatic life criteria for cadmium. In addition, EPA is considering revising the 304(a) criteria for selenium and mercury in response to concerns raised during ESA consultation on the “California Toxics Rule” (65 FR 31682). The Spokane Tribe has committed to update its aquatic life criteria, as appropriate, when these new revisions are published by EPA. (Letter from Spokane Tribe to John Iani, Regional Administrator, EPA Region 10, October 15, 2002).

### **3) Dissolved Oxygen**

***Section 9, Water Use and Criteria Classes, (1)(c)(ii), (2)(c)(ii), (4)(c)(ii)*** – in this section the Tribe has adopted different dissolved oxygen (DO) criteria for each waterbody class. Class AA waters are protected with an instantaneous minimum value of 9.5 mg/l. Class A waters are protected with an instantaneous minimum of 8 mg/l. Lake Class waters are protected for no measurable decrease from natural conditions. According to EPA’s criteria recommendations (Quality Criteria for Water, 1986, Table 1), the one-day minimum value for early life stages of cold water biota is 8.0 mg/l. This is the most sensitive life stage in reservation waters. The salmonid species present in Reservation waters include kokanee, eastern brook trout, German brown trout, redband trout, and rainbow trout. None of these species is listed as threatened or endangered under the Endangered Species Act. The Tribe has classified the Spokane River as Class A and the Columbia River as Class AA. The Columbia River classification is consistent with the classification in the Washington water quality standards.

The DO criteria in the Class AA, Class A and Lake Class waters are protective of the fish and other aquatic life uses in these waters and therefore are consistent with 40 CFR § 131.11(a)(1) and are approved..

#### **4) Temperature**

***Section 9, Water Use and Criteria Classes, (1)(c)(iv), (2)(c)(iv), (4)(c)(iv), except for the daily maximum temperature criteria which were withdrawn by the Tribe by letter dated October 15, 2002*** – this section includes temperature criteria specified under each waterbody classification, however, the Class A and AA criteria are identical and the Lake Class waters are to be protected for “no measurable change from natural conditions.” The Class AA and A criteria are divided by species, life stage, and time of year as follows:

***Spawning and rearing of naturalized populations of indigenous salmon and trout:***

June 1 - Sept 1	not to exceed 7-day average of the daily max of 16.5 C
Sept 1 - Oct 1 & April 1 - June 1	not to exceed 7-day average of the daily max of 13.5C
Oct 1 - April 1	not to exceed 7-day average of the daily max of 11C

***Spawning and rearing where the only salmonids present are non-anadromous forms of naturalized rainbow and redband trout:***

June 1 - Sept 1	not to exceed a 7-day average of the daily max of 18.5C
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From EPA's published criteria for temperature (*EPA Quality Criteria for Water, 1986*),

Table 11: *Maximum weekly average temperatures to support growth*

<u>Fish Species</u>	<u>Max. weekly average</u>
Coho salmon	18C
Sockeye salmon	18C
Rainbow trout	19C

Table 12: *Maximum weekly average temperature for spawning*

<u>Fish Species</u>	<u>Max. weekly average</u>
Coho salmon	10C
Sockeye salmon	10C
Rainbow trout	9C

In comparing the Spokane Tribe's temperature criteria with the EPA criteria recommendations it is important to recognize that the Tribe's criteria for the 7-day average are addressing the maximum temperature, as opposed to the EPA criterion, which is a weekly average. The data from 752 stream sites in the Western United States, particularly the Northwest, were reviewed to create a conversion factor to allow a comparison of these different measurement metrics. The results from Dunham et al. (2000) are as follows:

In Salmon and Trout Habitat, to Convert from:	To a 7-day average of daily max
Weekly mean (highest)	Add 3.18 degrees C
Daily mean (highest)	Add 2.60 degrees C

Based on these conversions, the Tribe's criteria for the 7-day average of the daily maximum appear to be as protective or more protective than the EPA recommendations for rearing, spawning, and embryo survival and growth.

As a result of EPA's recently completed consultation on temperature criteria in Oregon, EPA Region 10, along with states and tribes in the Region, is engaged in a Regional Temperature Project to assess the most recent scientific literature specific to salmonids and develop more up-to-date regional temperature recommendations that are consistent with the need to protect threatened and endangered salmonids. That project is still ongoing, so final recommendations are not available, however the project has completed a peer reviewed analysis and synthesis of all the available literature on the physiological effects of temperature on salmonids, salmonid behavior and temperature, and temperature interaction with other stressors [EPA, 2001(a); EPA, 2001(b); EPA, 2001(c); EPA, 2001(d)]. Based on these reports the following table contains a summary for each life stage of the temperature ranges that are associated with various levels of effect.

## Summary of Temperature Considerations For Salmon and Trout Life Stages

Life Stage	Temperature Consideration	Temperature & Unit	Reference
Spawning and Egg Incubation	*Temp. Range at which Spawning is Most Frequently Observed in the Field	4 - 14°C (daily avg )	Issue Paper 1; pg's 17-18 Issue Paper 5; pg 81
	* Egg Incubation Studies - Results in Good Survival -Optimal Range	4 - 12°C (constant) 6 - 10°C (constant)	Issue Paper 5; pg 16
	*Reduced Viability of Gametes in Holding Adults	> 13°C (constant)	Issue Paper 5; pg 's 16 and 75
Juvenile Rearing	*Lethal Temp. (1 Week Exposure)	23 - 26°C (constant)	Issue Paper 5; pg's 12, 14 (Table 4), 17, and 83-84
	*Optimal Growth - unlimited food - limited food	13 - 20°C (constant) 10 - 16°C (constant)	Issue Paper 5; pg's 3-6 (Table 1), and 38-56
	*Rearing Preference Temp. in Lab and Field Studies	10 - 17°C (maximum daily average or average temp)	Issue Paper 1; pg 4 (Table 2)
	*Impairment to Smoltification	12 - 15°C (constant)	Issue Paper 5; pg's 7 and 57-65
	*Impairment to Steelhead Smoltification	> 12°C (constant)	Issue Paper 5; pg's 7 and 57-65
	*Disease (lab studies) -Severe - Elevated - Minimized	18 - 20°C (constant) 14 - 17°C (constant) 12 - 13°C (constant)	Issue Paper 4, pg's 12 - 23

Adult Migration	*Lethal Temp. (1 Week Exposure)	21- 22°C (constant)	Issue Paper 5; pg's 17, 83 - 87
	*Migration Blockage and Migration Delay	21 - 22°C (average)	Issue Paper 5; pg 's 9, 10, 72-74. Issue Paper 1; pg's 15 - 16
	*Disease (lab studies)		
	- Severe	18 - 20°C (constant)	Issue Paper 4; pg's 12 - 23
	- Elevated	14 - 17°C (constant)	
	- Minimized	12- 13°C (constant)	
	*Adult Swimming Performance		
	- Reduced	> 20°C (constant)	Issue Paper 5; pg's 8, 9, 13, 65 - 71
	- Optimal	15 - 19°C (constant)	
	* Overall Reduction in Migration Fitness due to Cumulative Stresses	> 17-18°C (prolonged exposures)	Issue Paper 5; pg 74

To protect spawning the Tribe's temperature criteria include a 7-day average of the daily max of 13.5C at the tail ends of the spawning period (September 1 - October 1 and April 1 - June 1) and 11C during the period of October 1 - April 1. These numbers are at the high end of the spawning and egg incubation ranges observed (generally as constant temperatures) in the studies summarized in the table. If the table values above are converted, per the Dunham recommendations, so that they are more comparable with a 7-day average of a daily maximum, then it can be concluded that the tribal values would be protective of salmonids.

The comparisons with the table summarizing the technical literature reviewed by the Regional Temperature Project again are approximate, by virtue of the different metrics used to measure temperature in the studies versus the Tribe's criteria. When EPA has completed the Regional Temperature Project, Region 10 will advise the Tribe whether future revisions to the Tribe's temperature criteria are recommended to protect the salmonid uses designated for Reservation waters.

Based on the above comparison of the tribal criteria with the 304(a) criteria and a peer-reviewed summary of recent scientific literature, EPA approves the Tribe's 7-day average of the daily maximum temperature criteria for class AA and class A waters as protective of designated uses. The narrative criterion for the Lake Class prevents any measurable change from natural conditions. This is as protective as possible, given natural conditions and is consistent with the requirements of 40 CFR § 131.11(b)(2).

## **5) pH**

***Section 9, Water Use and Criteria Classes, (1)(c)(v), (2)(c)(v), (4)(c)(v)*** – the numeric values for pH associated with the Class AA and Class A waterbodies (pH range of 6.5 to 8.5) are

consistent with the EPA criteria found in the *Quality Criteria for Water*, 1986 and EPA's revised § 304(a) criteria (*National Recommended Water Quality Criteria - Correction*, April, 1999). For the Lake Class there is to be no measurable change from natural conditions. The adopted criteria, including the natural condition provision, are sufficient to protect designated uses and are consistent with federal requirements at 40 CFR 131.11 (b)(1). The pH criteria are therefore approved.

#### **6) Total Dissolved Gas**

*Section 9, Water Use and Criteria Classes, (1)(c)(iii), (2)(c)(iii), (4)(c)(iii)* – the numeric value for total dissolved gas (not to exceed 110 percent of saturation) for all classes of waters in the Spokane WQS is consistent with the EPA criterion found in the *Quality Criteria for Water*, 1986 and EPA's revised § 304(a) criteria (*National Recommended Water Quality Criteria - Correction*, April, 1999). EPA believes the adopted criteria are based on sound scientific rationale, are sufficient to protect designated uses, and are consistent with federal requirements at 40 CFR 131.11(b)(1), therefore the total dissolved gas criteria are approved.

#### **7) Nutrient Criteria**

*Section 9, Water Use and Criteria Classes, (4)(c)(vii), Table 4* – this provision pertains only to lakes and requires that nutrient criteria be established with the aid of Table 4. This requirement is consistent with EPA's guidance to States and authorized Tribes to develop nutrient criteria to protect the uses of surface waters ( 66 FR 1671). The Table 4 guidance values are identical to the values used by Washington State as guidance for nutrient criteria in the Columbia Basin Ecoregion where the Spokane Reservation is located. These values are based on an empirical examination of lake phosphorus values and trophic states conducted by Washington technical staff which is scientifically defensible, and was previously approved by EPA as consistent with the requirements of 131.11. (EPA letter to Washington Department of Ecology, February 6, 1998). Therefore EPA approves the Spokane Tribe's narrative criterion for lake nutrients.

#### **8) Biological Criteria**

*Section 8, Biological Criteria* -- this section of the Tribe's WQS regulations contains narrative biological criteria. The WQS regulations allow the adoption of narrative criteria [40 CFR § 131.11(b)(2)]. The primary statutory basis for Tribes to develop biocriteria is found in Sections 101(a) and 303(c)(2)(B) of the CWA. Section 101(a) of the CWA establishes as the objective of the CWA the restoration and maintenance of the chemical, physical and biological integrity of the Nation's waters. To meet this objective water quality criteria should address biological integrity. Section 303(c)(2)(B) of the CWA provides that when numeric criteria are not available, Tribes shall adopt criteria based on biological monitoring or assessment methods; biocriteria can be used to meet this requirement (WQS Handbook, 1994, pp. 3-26 to 3-28).

EPA believes the adopted narrative biological criteria, and the relevant definitions (“appropriate reference site or region”, “biological assessment”, and “resident aquatic community”) are sufficient to protect designated uses and are consistent with federal requirements at 40 CFR 131.11, the CWA, and EPA’s implementing guidance in the WQS Handbook 1994. Therefore, the Tribe’s biological criteria found in Section 8 are approved.

## **9) Wetlands**

**Section 12, Wetlands** – this section applies the Narrative Criteria from Section 5 and the Toxic Pollutants Criteria from Section 6 to all wetlands within the Reservation that are not constructed or engineered. The Definitions section makes it clear that constructed wetlands refers to “those wetlands intentionally created from non-wetland sites for the sole purpose of wastewater or stormwater treatment.” The Section 12 provisions require that water quality in wetlands be maintained at naturally occurring levels or within the natural range of variation of the wetland and also specify that physical and biological characteristics of the wetland be maintained. With the inclusion of wetlands as “Surface waters of the Tribe”, the Tribe’s antidegradation policy will apply to wetlands, as it does with all other surface waters of the Reservation. This is consistent with the guidance in *Water Quality Standards for Wetlands* (EPA, July 1990).

Extension of the EPA national 304(a) numeric aquatic life criteria to wetlands is recommended as part of a program to develop standards and criteria for wetlands. The national 304(a) numeric aquatic life criteria are designed to be protective of aquatic life for surface waters and are generally applicable to most wetland types (*Water Quality Standards for Wetlands*, 1990). EPA expects states and authorized tribes to apply appropriate numeric criteria to wetlands. The Tribe is applying all of its Section 6 toxic pollutant criteria. EPA is approving the aquatic life criteria on Table 1. Some pH-dependent criteria, such as ammonia and pentachlorophenol, may not be protective in wetlands because the wetland pHs may be outside the normal pH range of 6.5 - 9.0. However, the Tribe’s provision of maintaining and protecting naturally occurring levels of parameters should take precedence in this case.

The narrative Biological Criteria in Section 8 will provide additional protection for wetlands. The Narrative Criteria in Section 5 as well as the provisions under Wetlands in Section 12 for protecting physical and biological characteristics are particularly important for wetlands because many impacts to wetlands from nonpoint source activities affect physical and biological characteristics, rather than chemical characteristics.

The Tribe’s criteria for wetlands meet EPA’s recommendations to States and Tribes as found in *Water Quality Standards for Wetlands* (1990), and meet the requirements of 40 CFR 131.11(a)(1) and (b)(2). Therefore, the wetland provisions in Section 12 are approved.

## **III. PROVISIONS WHICH DO NOT CONSTITUTE WQS UNDER SECTION 303(c) OF THE CWA**



Many State and Tribal WQS regulations contain provisions that specify the terms of National Pollutant Discharge Elimination System (NPDES) permits, Section 303(d) impaired waters listing requirements, and/or enforcement provisions or provide general language that describes the purpose of the water quality standards. Because all of these programs are related to the implementation, maintenance and protection of water quality it makes sense to include them in a single regulatory package. However, EPA has identified several sections of the Tribe's WQS regulations that EPA believes are beyond the scope of Section 303(c) of the CWA.

**A. Introduction**

Section 1 describes the Tribe's authority to adopt standards. It also sets forth the purposes of these standards. As these provisions are not standards, EPA is not required to take action on these provisions under Section 303(c) of the CWA.

**B. Narrative criterion #7**

Under Section 5, narrative criterion #7, directs the permit issuing authority to "attempt to insure that to the extent practicable, all waters are free from soil particles" from various land disturbance activities or from from uses of water on land. This provision pertains to best management practices rather than an explicit instream water quality criterion, and therefore is outside the purview of Section 303(c) of the CWA.

**C. Implementation**

Section 13 includes two provisions directing point and nonpoint source activities and activities generating stormwater to comply with the standards. These provisions are not standards reviewable under CWA Section 303(c), therefore EPA is not taking specific action on this portion of the Tribe's standards.

**D. Enforcement**

EPA does not require specific enforcement provisions as part of its standards regulations at 40 CFR 131.6 and this provision is not a standard reviewable under Section 303(c) of the CWA, therefore EPA is not taking action on this provision in the Tribe's standards.